

AN ANALYSIS OF CHILD INTERVIEWING PRACTICES:  
A FIELD STUDY OF ONE CANADIAN  
POLICE ORGANIZATION

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**An Analysis of Child Interviewing Practices:  
A Field Study of One Canadian Police Organization**

by

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## ABSTRACT

Child witness and victim interviewing practices were examined in a sample of interviews ( $N = 45$ ) from Canadian police officers. Specifically, the interviews were coded for introductory behaviours (e.g., building rapport), inappropriate interview behaviours (e.g., interruptions), the type of questions asked, the type of response given by the child, the length of the child's response, the number of unique central and peripheral details given by the child, and the proportion of words spoken by the interviewer(s) and child. The lengths of the complete interview and the substantive phase of the interview were also recorded. Results showed that, on average, approximately 8% of all questions asked were open-ended invitations. Open-ended invitations resulted in the longest interviewee response, along with the greatest number of central details. The implications of these findings for reforming child interview practices and the need for training and feedback systems are discussed.

*Keywords:* investigative interviewing, interrogation, best practices, child interviewing, training, feedback

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## Introduction

For a long time, legal practitioners thought that most children are incapable of providing accurate eyewitness testimony because they have unreliable memories, are highly suggestible, and have immature language development (Ceci & Bruck, 1993; Larsson & Lamb, 2009; Yuille, Hunter, Joffe, & Zaparniuk, 1993). However, that attitude began to change over the past 30 years because of the empirical evidence demonstrating that children are capable of providing complete and detailed testimony (Orbach, Hershkowitz, Lamb, Sternberg, & Horowitz, 2000; Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001). In fact, very young children can accurately recall certain details from experienced events (Davies & Westcott, 1999; Larsson & Lamb, 2009). However, there are a number of complex interacting factors that affect children's ability to recall and report experienced events including their age, the maturity of their memory processes, their language and narrative abilities, and the extent of their suggestibility. The focus of the current study is to establish how children are interviewed by police investigators and how this affects their recall. As children are sometimes the only victims or witnesses to a criminal event, the information that police investigators obtain from them will ultimately shape their investigation. Therefore, interviewers must use best practices when interviewing children in order to obtain sufficient, reliable, and relevant investigative information, and also to reduce miscarriages of justice such as wrongful convictions.

Given the importance of investigative interviewing, the goal of the current research is to see how well best practices are actually being implemented in the field. To accomplish this goal, it is first useful to consider a salient Canadian court case that

illustrates how the failure to implement best child interviewing practices can result in a wrongful conviction. Second, child developmental issues including memory, language acquisition, and suggestibility are reviewed to put into context some of the central factors that have to be considered when interviewing children and developing effective interviewing protocols. Several child interviewing protocols have been created to enhance child recall of experienced or witnessed events are then reviewed and evaluated, and the common themes across these protocols are presented. The evaluation of the existing child interviewing protocols reveals that the National Institute of Child Health and Human Development (NICHD) protocol is the most empirically validated interviewing procedure. As a result, the NICHD protocol was used to provide the framework in which to evaluate the quality of child interviewing practices in the field.

### **On the Importance of Getting it Right: The Randy Druken Case**

It is unfortunate that the importance of ensuring that child interviewing is done correctly is most evident in cases of wrongful convictions. One example of how poor child interviewing skills resulted in a major fiasco and call to reform child interviewing was the case of Randy Druken. On June 12, 1993, Brenda Young was stabbed to death in her home in St. John's, Newfoundland and Labrador. Two years later, on March 18, 1995, Randy Druken, Young's boyfriend, was subsequently convicted of her murder. Druken was sentenced to life imprisonment with no eligibility of parole for fourteen years. Forming the basis for Druken's murder charge was a statement given by Brenda's nine year-old daughter, Cindy Young. However, as presented in the Lamer Inquiry (Lamer, 2006), there were a number of problems and concerns with how Cindy was interviewed

regarding her mother's murder. First, it was believed that the police focused exclusively on Druken as the prime suspect from the outset of the investigation. The tunnel vision on Druken was perhaps due to his extensive criminal record, being under supervision for a stabbing offence at the time of Brenda's murder, and a previous conviction of assault against Brenda. The closed-minded investigative approach might have contributed to the improper interviewing of Cindy. For example, in Cindy's first official account, she stated that she heard a man's voice on the night of her mother's murder. Cindy stated that the voice could have been that of Randy Druken or another adult male; Cindy could not distinguish the voice she heard. However, Cindy was told by an interviewer there were no other suspects and asked again if it was Druken's voice that she heard, to which she acquiesced, albeit hesitantly.

Second, Cindy was interviewed on multiple occasions (i.e., more than six) by a number of individuals (e.g., police officers, social workers, family members, the Crown), and often for a long period of time (i.e., some interviews lasted more than an hour). This is problematic because such interview practices often lead to suggestibility and inaccurate or incomplete accounts. Specifically, Cindy's accounts varied greatly across interviews. This variation could be due to the leading questions often asked by the interviewers, or due to potentially suggestible conversations she had with her great-grandmother, who thought fondly of Druken. For example, during interviews with police, Cindy's answers were often ignored and interviewers proceeded with repeated and aggressive lines of suggestive questioning until they received the answer they wanted (Lamer, 2006).



Justice Lamer concluded that Cindy's multiple testimonies were affected by an array of interviewers who had poor understanding of child development and also regarding how to properly conduct child forensic interviews. After a lengthy inquiry, her testimonies, which were crucial in laying charges against Druken, were deemed unreliable. A number of recommendations arose from the Lamer Inquiry (Lamer, 2006). First, it recommended that more resources needed to be put into child interview training. Moreover, child interview training must include the psychology of child development. Second, official guidelines and policy ought to be developed for interviewing child witnesses and victims. Given the high profile nature of this inquiry in Canada, a question remains as to whether police organizations have heeded these recommendations by implementing best practices surrounding child interviewing.

### **Developmental Factors to Consider When Developing Child Interviewing Protocols**

There is a wealth of basic research on the factors that impact the recall of information by children. For instance, some of the central developmental issues pertain to memory development, language development, and suggestibility, all of which are related to the child's age. It is imperative that these developmental issues be readily apparent in any interviewing protocol that is developed in order to help children recall information. In other words, in order to be able to evaluate existing child interviewing protocols properly, it is first important to have an appreciation of the child developmental issues that ought to be accounted for by these protocols. The aforementioned three central developmental issues are reviewed briefly below.

## Memory

As children from two to 18 years old have been called to testify in court, a brief overview of memory development during these years will be discussed. Specifically, a brief overview of the development of autobiographical and declarative memory will be presented. Autobiographical memory refers to memories of specific personally experienced event information (e.g., what, where and when of an experience) and the knowledge of past experiences that happened to the individual (Tulving, 2002). Declarative memory can be divided into two categories, namely episodic memory (memory for events and experiences) and semantic memory (memory for facts). Autobiographical memory is often considered distinct from declarative memory in that autobiographical memory includes more specific information about oneself as experiencing the event and guides behaviour in relation to social and emotional functions such as self-definition (Fivush, Berlin, Sales, Mennuti-Washburn, & Cassidy, 2003). As children develop, their ability to encode, consolidate, store, and retrieve memories becomes more advanced. Bauer (2007) linked these advances with age to three components, including changes in mnemonic processes associated with brain development, developments in conceptual domains, and improvements in narrative skills. The development in conceptual domains refers to the emergence of the cognitive self around age two (see How & Courage, 1997; Howe, Courage, & Edison, 2003) and the ability to organize events temporally (Wenner & Bauer, 1999). These theoretical findings are evidenced in the studies reviewed below. Specifically, within this section on memory, children's memory for non-traumatic and traumatic events will be discussed. In addition,

children's ability to organize narratives temporally will be presented. Next, the effects of time delays on children's memory will be examined.

Decades of research have shown that children are able to remember details from experienced and witnessed events (Ceci & Bruck, 1993; Klemfuss & Ceci, 2012). In an early study examining memory for a non-traumatic event, Hammond and Fivush (1991) examined children's memory for a trip to Disneyworld. The researchers interviewed children between the ages of 39 and 48 months and 51 and 59 months. Their results showed that both groups of children were able to remember a large amount of detail. However, it is important to note the complex relationship between age and memory. Specifically, older children were able to remember more detail than younger children. In addition, younger children required more focused questioning to remember information compared to older children, who were better at elaborating and remembering information spontaneously. As the memory system is less developed at a younger age, children require external cues for retrieving information (Bauer, 2007). Specifically, Bauer contends that young children have not yet developed their own retrieval cues and must rely on external cues to provide as much information as older children. This would explain the need for more focused questioning. These results have also been replicated for experiences with traumatic events. For instance, Peterson and Bell (1996) interviewed children between the ages of two and 13 who suffered a traumatic injury. Children as young as two years old were able to remember nearly half of the details from the traumatic event and children as young as three years old remembered up to three quarters of the details. The oldest children interviewed in their study were able to remember as

much as 94% of the details from the traumatic experience. As can be interpreted from their results, as children's memory for experienced events increases over time, so does the accuracy of their memory. These results have also been replicated in a recent field study by Cyr and Lamb (2009). It should be noted that because this was a field study, there was no indication of ratio of accurate to inaccurate information. In this study by Cyr and Lamb, the authors examined police interviews of alleged sexual assault victims, aged three to 13. Their results showed that the older children remembered more information compared to the younger children. In addition, the older children remembered more details spontaneously and required less focused prompts. These findings have been replicated in a number of additional field studies examining traumatic experiences (e.g., Orbach et al., 2000; Sternberg et al., 2001).

A key component and arguably defining feature of episodic memories is time and the ability of children to organize their autobiographical memories in a temporal narrative (Tulving, 2002). Being able to reliably recall the date, times, and chronological order of experienced events is of high practical importance for witnesses and alleged victims, as children will be required to provide specific information to police investigators. Furthermore, children are often questioned about temporal events by legal practitioners to determine their competency in the courtroom (Pipe, Lamb, Orbach, & Esplin, 2004). In order to remember the time and sequence of an experienced event, children are required to relate information in episodic memory to their knowledge of time and time patterns. As with the amount of information a child can remember improves with age, so does their ability to relate episodic information and time patterns (e.g., Friedman, 1990, 1992, 1993,

2000). This is a complex skill which was examined recently by Friedman and Lyon (2005). The authors posited that the interaction of a number of systems is required in order to temporally organize events, namely that episodic memories contain temporal information, the child has an understanding of the concept of time, and the development of mental processes that integrate this information. In their experiment, Friedman and Lyon questioned 4 to 13 year olds about an in-class demonstration. Children were able to recall some contextual information (e.g., time of year) when questioned three months later regarding the order of the in-class demonstrations. Their results showed that older children were able to use more precise cues (e.g., time of day) better than younger children. In the first field study to examine children's temporal references to non-staged events, Orbach and Lamb (2007) examined the interviews of four to 10 year old children who were alleged victims of sexual abuse. They measured the child's reference to temporal attributes (i.e., dating, sequencing, number of occurrences, duration, and frequency). Their results showed a linear improvement, with older children using more temporal attributes compared to younger children. Specifically, their results showed a marked increase in children at age eight.

Another important aspect to consider when examining children's memory for experienced events is the delay between the experience and the disclosure. For example, children often have to wait nine months or more after charges are filed before their evidence is heard in court (Flin, 1993). Furthermore, this delay is compounded by the fact that children do not often disclose immediately and may wait until one year following the event to disclose (Pipe, Lamb, Orbach, & Cederborg, 2012). Research has shown that

children as young as two years old are able to recall memories that happened months prior and three year olds can recall events that happened in the past year (see Peterson, 2012 for a review). However, the age of the child and the length of delay between experience and recall affect the child's memory. In a study by Tizzard-Drover and Peterson (2004), the authors interviewed children about a traumatic injury at various time delays. Their results showed that longer delays had the highest impact on the younger children. Specifically, pre-schoolers provided less details and less accurate information when interviewed a year after the event, compared to older children. However, when younger children were interviewed early following an event, they were able to provide more information following a delay in a repeated interview compared to younger children who were not interviewed early after an event. Similar results have been found in other studies (e.g., Pipe, Gee, Wilson, & Egerton, 1999; Quas, et al., 1999).

Taken together, the studies reviewed above show that children store information in their autobiographical memories beginning at an early age. However, as the child develops, so does their autobiographical memory and the amount of detail they can remember. In the next section, the importance of language on a child's recall ability and autobiographical memory is discussed.

## **Language**

Children's metacognitive awareness and communication skills are developing rapidly throughout the preschool years. Throughout this time, children are developing a mastery of the language and establishing their understanding of complex syntax and semantics (Klemfuss & Ceci, 2012; Nelson & Fivush, 2004). Ultimately, a child's ability

to recall events completely and express his or her memories is related to his or her linguistic proficiency (Howe & Courage, 1997). For example, in order to provide specific information such as the order of events, children need to be aware of temporally related linguistic markers, or relational words such as before and after. A study by Fivush and Haden (1997) showed that while young children are able to use rudimentary forms of relational words, the skills increased dramatically from age three and a half to age six. Language also helps to structure how memories are established and conversations about events with others serve to rehearse the event and strengthen it in storage for later recall.

However, research has shown that the wording used by those in the legal system is complex and represents a barrier for young children (see Saywitz, Goodman, & Lyon, 2002). Conversely, legal professionals may also have difficulties understanding children (Shuy, 1996). This is problematic as legal professionals may misunderstand or misrepresent a child's account, thus potentially contaminating the investigation. A number of studies have shown that there is a positive linear relationship between age and a child's linguistic ability (e.g., Chae & Ceci, 2005; Kulkofsky, 2010; Quas, Wallin, Papini, Lench, & Scullin, 2005; Roebbers & Schneider, 2005). While a child's language proficiency improves greatly with age, research findings have shown, however, that even children as young as three are able to provide information about an experienced event (Hershkowitz, Lamb, Orbach, Katz, & Horowitz, 2012). Their results also showed that the young children were able to understand, interpret, and process the questions asked, and had the requisite communication skills to address the questions. However, as expected, their findings showed that older children were able to provide more responses



and more on-track responses compared to younger children. In addition, younger children provided less information when asked more broad-stroke open-ended questions compared to older children. Their results showed that, while young children are able to provide information, they may require the use of more focused questions.

Depending on their linguistic development, children may sometimes rely on scripts or generalities when giving an account of an experienced event (this can also occur when children have repeated experiences and children tend to provide gist information; for more discussion on this issue, see Bauer, 2007; Hudson, 1986). Given the importance of language development, interviewers are encouraged to tailor their language to match the child's linguistic competence (Davies & Westcott, 1999). When interviewers fail to match the language of the child, children may become confused and give inaccurate or incomplete responses (Wilson, 1995). Further, interviewers are encouraged to be cognizant of the fact that children may use words that they do not fully understand, especially in relation to sexual terms (Gordon, Schroeder, & Abrams, 1990). Therefore, in order to obtain a complete account from a child, interviewers ought to have the child explain in detail what he or she means by the particular word they are using to describe an event.

### **Suggestibility**

One of the concerns when interviewing children is their level of suggestibility. Suggestibility refers to the acceptance of false information into memory as facts of an event (Pezdek & Roe, 1997; Quas, Goodman, Ghatti, & Redlich, 2000). There are a number of measures of suggestibility, including yielding to suggestive questions, shifting

one's answer in response to negative feedback, and maintaining accuracy in response to misleading questions under pressure (see Scullin & Bonner, 2006) . Research has shown that there are a number of factors that contribute to children's suggestibility such as cognitive strength (e.g., deficits in memory, theory of mind), personality factors (e.g., shyness), and the interview context (e.g., types of questions asked; see Bruck & Melnyk, 2004 for a comprehensive review).

Theory of mind refers to one's ability to take into consideration other's perspective and the knowledge that they themselves or others can have false beliefs (Wellman, Cross, & Watson, 2001). Theory of mind is of particular importance for children in a police interview context as this executive function allows children insight into knowledge that they or the interviewer can hold false beliefs. Theory of mind is believed to emerge between three and five years of age (Scullin, Kanaya, & Ceci, 2002). A study by Scullin and Bonner (2006) examined the relation between theory of mind and suggestibility. Their results showed that when the interviewer exhibited strong pressure on the child and used misleading questions, theory of mind was related to suggestibility. Specifically, older children with a higher theory of mind score were at lower risk of suggestibility. Similar results have been found for previous studies as well (e.g., Leichtman & Ceci, 1995; Lepore & SESCO, 1994).

Of particular interest for the current study however is the interview context, or specifically, how the types of questions asked and representational aids used contribute to a child's suggestibility. A study by Eisen, Qin, Goodman, and Davis (2002) interviewed children aged three to 17 about a doctor's examination. As expected, younger children (3-

5 year olds) were more susceptible to misleading questions compared to the older children. In addition, older children reported fewer errors compared to younger children. The results showed that while suggestibility decreases with age (see Brainerd & Reyna, 2012 for exceptions), young children are especially vulnerable to suggestibility. Therefore, interviewers and interviewing protocols must take these findings into consideration when interviewing children. It is also important to note that children tend to acquiesce when being questioned by an adult or someone in a position of authority, such as a police officer (Fritzley & Lee, 2003; Pipe et al., 1999). Therefore, it is important that interviewers avoid questions with simple yes/no answers.

Another pertinent area relating to suggestibility is the use of representational aids during a police interview. These aids often come in the form of anatomically correct dolls and human figure drawings (also referred to as human body diagrams). Poole and Bruck (2012) conducted a review of the use of interviewing props and how they contribute to children's report of touching. One of the issues reported by these authors is that children often fondled the genitalia on the dolls out of curiosity. Furthermore, the use of dolls has been related to false claims from young children (age three and four years old) regarding touch and conversely, children falsely denying being touched (Bruck, Ceci, & Francoeur, 2000; Bruck, Ceci, Francoeur, & Renick, 1995). Research by Thierry, Lamb, Orbach, & Pipe (2005) showed that young children are also prone to provide an increased number of fantasy-based details when using dolls. Furthermore, the authors found that when dolls were used during an interview, interviewers relied heavily on them, forgoing open-ended questions early in the interview. However, their research showed that dolls can be

effective when used with older children. Specifically, their results showed that older children (7-12 years old) reported more details when using the dolls. Researchers have hypothesized that dolls are ineffective for younger children as they have trouble with knowledge that the doll represents an object and a symbol of themselves (i.e., representational insight; DeLoache, 2000; DeLoache, 2005). While the use of dolls can be effective with older children, there is no age at which dolls are deemed safe to use (i.e., will not result in false details; Poole & Bruck, 2012).

In regards to human figure drawings, Brown, Pipe, Lewis, Lamb, and Orbach (2007) examined children's (5-7 years old) ability to use this representational aid when discussing a physical contact-touching event. Their results showed that children provided relatively few new details when human figure drawings were incorporated following the verbal interview. In addition, the use of drawings prior to and following the verbal interview led to an increase in false touch reports. The authors found similar results in a recent follow-up study (Brown, Pipe, Lewis, Lamb, & Orbach, 2011).

The studies reviewed above showed that when representational aids are used with young children, the risk of suggestibility is high. However, when anatomically correct dolls were used with older children, they were able to recall additional information. Overall, it appears that the use of representational aids offers a greater risk than benefit, and should be avoided (for a review see Poole & Bruck, 2012; Salmon, Pipe, Malloy, & MacKay, 2012).

The research reviewed above shows that memory is a constructive and reconstructive process, and not static like a video recording. The fact that our memories

are reconstructed makes them susceptible to suggestibility. In the next section, additional issues that must be considered when interviewing child are discussed.

### **Additional Issues of Concern when Interviewing Children**

As mentioned previously, any possible negative effects of developmental issues on recall ability are compounded by how the child is interviewed, or more specifically, how they are questioned. An interviewer following best practices would, regardless of an interviewee's age, recommend that interviewers use a "funnel approach" to their questioning style. A funnel approach refers to when the interviewer engages in the use of broad question types first (i.e., open-ended questions) and then use more focused questions seldom and near the end of the interview (i.e., directive questions; Lamb, Sternberg, & Esplin, 1998). Open-ended questions (i.e., invitations and cued-invitations) tap into recall memory, which has been shown to result in the best information quality and quantity (e.g., Lipton, 1977). Furthermore, the use of open-ended questions shifts the balance of power to the child and allows them to feel in control of the interview, also reducing any potential instances of suggestibility (Teoh & Lamb, 2010). While the amount of detail provided by the child through open-ended questions will generally increase with age, the accuracy of such information remains high, regardless of age (Saywitz, 1995). When an interviewer has exhausted memory retrieval using free recall, he or she is then encouraged to use more specific questions to elicit any information not provided by the child (i.e., prompted recall). This prompted recall includes the use of directive questions (i.e., wh- and how question types). It is imperative that interviewers build on the details and information provided by the child when using directive questions

and not introduce any new information. By engaging in this practice, the interviewer can ensure that he/she is not contaminating the child's responses.

Interviewers are discouraged from using closed yes/no and forced-choice (option-posing) questions because they tap into recognition memory if a correct option is given, or it could result in the child guessing if a correct answer is not given. Either way, the response from an option-posing question tends to result in shorter responses than those provided by free recall memory (Larsson & Lamb, 2009). For instance, children tend to answer closed yes/no with simply yes or no, or simply pick one of the options from forced-choice questions rather than provide their own answer (Fritzley & Lee, 2003). It is important that interviewers refrain from these option-posing questions because children tend to feel pressured to provide an answer, even if they do not know the answer (Saywitz, Snyder, & Nathanson, 1999). In addition, when asking forced-choice questions, the interviewer may not be providing the correct answer. This is problematic as the child may be aware of the answer but not want to correct the interviewer. It is also imperative that interviewers refrain from asking leading or suggestive questions. As discussed previously, research has shown that due to developmental differences, children under the age of six tend to be influenced more by leading questions than older children (Cassel & Bjorklund, 1995). Interviewers should also avoid asking multiple questions at once as children have trouble answering such questions and tend to simply answer just one of the questions (Hunt, Komori, Kellen, Gallas, & Gleason, 1995). The use of the preceding question types (i.e., closed yes/no, forced-choice, leading, multiple) is discouraged

because the information elicited from such question types is considered unreliable and often incomplete.

Researchers have identified a number of additional practical issues that ought to be considered when interviewing a child. First, interviewers should establish rapport with the child. Building rapport with the child has been shown to put children at ease and alleviate any potential stress of children who are reluctant to disclose (Siegman & Reynolds, 1983). In addition, rapport building has been shown to enhance the child's informativeness about experienced events and also reduce chances of suggestibility as it reduces the impact of an authority figure (Teoh & Lamb, 2010).

Second, the interviewer should establish that the child understands the difference between telling the truth and a lie. This is an important instruction as very young children are capable of lying (Klemfuss & Ceci, 2012). However, research has shown that when children are asked to promise to tell the truth they often feel compelled to tell the truth. For example, research by Talwar, Lee, Bala, & Lindsay (2002) examined how both a discussion on the morality of truth-telling and a promise to tell the truth was related to truth-telling behaviour in children. Their results showed that when children disregarded an instruction from the experimenter, a promise to tell the truth resulted in significantly less lying compared to a discussion on the morality of truth-telling. In addition, verifying that the child understands this difference at the beginning of the interview is a means to document the child's legal competence (Saywitz & Camparo, 1998).

Third, children should not be told to "imagine" or "pretend" during the interview. Such instructions, especially for younger children, may lead them to report fantasy-based



details (see Pipe et al., 2004). Thus, this instruction should be avoided to ensure that the child's responses are not contaminated.

Fourth, children should be instructed about various interview ground rules, including that it is acceptable for them to say that they "don't understand", "don't know", and that it is acceptable to correct the interviewer (Ceci & Bruck, 1993). Rather than say that they "don't know", children tend to answer any question asked of them, despite not knowing the answer, or misunderstanding the question. For example, when asked the nonsensical question "Is milk bigger than water?" the majority of children provided an answer, rather than saying "I don't know" (Hughes & Grieve, 1980). Therefore, instructions such as the "don't know" instruction ensure that the child feels comfortable providing an informative account to the interviewer and also reduces potential instances of acquiescence and suggestibility.

Fifth, interviewers should refrain from engaging in positive or negative reinforcement. Research has shown that positive and negative reinforcement has been associated with increased false allegations (Bruck & Melnyk, 2004). In a study by Garven, Wood, and Malpass (2000), the authors found that young children (5-7 years old) exposed to reinforcement made significantly more false allegations (52%) compared to children who were not exposed to reinforcement (5%).

Sixth, interviewers should ensure that they focus on obtaining central details and refrain from obtaining peripheral details. It is important for the interviewer to focus on central details as these will ultimately form the basis of his or her investigation. In addition, a number of studies have shown that recall for central details is often more

accurate than recall for peripheral details. Furthermore, memory for central details is less susceptible to suggestion compared to memory for peripheral details (e.g., Cassel & Bjorklund, 1995; Coxon & Valentine, 1997; Goodman & Reed, 1986; Poole & White, 1991).

### **Creation of Child Interviewing Protocols**

There are a number of child interviewing protocols that have been created to enhance child interviewing practices. Some of these protocols include the Cognitive Interview, Memorandum of Good Practice, Systematic Approach to Gathering Evidence, Narrative Elaboration Technique, Step-Wise Interview, CornerHouse RATAC (Rapport, Anatomy Identification, Touch Inquiry, Abuse, and Closure) Protocol, and the National Institute of Child Health and Human Development (NICHD) Protocol. Each of these protocols are reviewed, and evaluated according to extent to which they have been validated and appear to take into consideration important findings from the developmental literature on memory, language, and suggestibility.

### **Cognitive Interview**

The Cognitive Interview (CI) was developed by Geiselman and his colleagues as a memory enhancement tool mainly for use with adult witnesses (Geiselman, Fisher, MacKinnon, & Holland, 1985). However, the CI has been adapted for use with children over the age of seven (Geiselman & Padilla, 1998; Memon, Cronin, Eaves, & Bull, 1993). The revised version of the CI incorporates five phases, which include explaining the purpose of the interview, eliciting a free narrative through open-ended questions, probing

the narrative, reviewing the information provided, and closing the interview. The CI is based on a theoretical framework of memory-retrieval, and findings from the social and cognitive psychological literature. There are four main techniques used in the CI, which include mental reconstruction (i.e., recreate context at time of alleged incident), exhaust memory (i.e., report all of the details that come to mind), change order (i.e., recall the events from multiple orders such as end to beginning), and change perspectives (i.e., recall the event from multiple perspectives; Geiselman et al., 1984). Interviewers are encouraged to practice using the CI techniques with the child on a neutral topic, prior to the interview about the alleged incident so they can become familiar with the technique and understand the interview process (Geiselman, Saywitz, & Bornstein, 1993).

The findings regarding the usefulness of the CI with children are mixed. Some research has shown that the CI can enhance children's accounts (Holliday & Albon, 2004; McCauley & Fisher, 1995; Milne & Bull, 2003; Saywitz, Geiselman, & Bornstein, 1992), while other studies have found an increase in reported errors (Memon, Wark, Bull, & Köhnken, 1997). To date however, there have not been any field studies examining the effectiveness of the CI with children.

### **Memorandum of Good Practice**

The Memorandum of Good Practice (the Memorandum) was developed in the UK in 1992 by the Home Office and the Department of Health (Davies & Westcott, 1999; Home Office/Department of Health, 1992). An advisory group was enacted to determine whether or not video-recorded interviews with children could be admissible in court, allowing the child to forgo the potentially stressful situation of testifying in court.

Following the decision to allow video-recorded interviews in court, experts (e.g., psychologists, lawyers) were commissioned to draft a set of interview guidelines. These guidelines, developed to ensure that interviews were in accordance with rules of evidence, ultimately became the Memorandum.

The Memorandum recommends that interviews follow through a series of five stages to conduct their interview (Sternberg, Lamb, Davies, & Westcott, 2001). The first phase consists of the interviewer building rapport with the child. As mentioned previously, there are a number of benefits to rapport building, including allowing the interviewer to estimate the child's linguistic competence (Warren, Wooddall, Hunt, & Perry, 1996). In this phase, the interviewer is also encouraged to set out interview guidelines for the child. These guidelines suggest that the interviewer challenge possible assumptions held by the child, including that every question must be answered and has a right or wrong answer, the interviewer already knows all of the details about the event in question, and that the child is not allowed to say that he or she does not know an answer. Interviewers are also advised to establish that the child understands the difference between telling the truth and a lie. The next phase involves the interviewer obtaining a free narrative from the child. The third phase involves the interviewer asking additional open-ended questions to obtain more information. In the fourth phase, the interviewer is instructed to use prompted questions to extract additional information. The last stage of the Memorandum is the closure stage. In this stage, the interviewer is instructed to summarize the information provided by the child and address any questions that the child may have. The interviewer also provides his or her contact information, and closes the

interview on a positive note by thanking the child for their time and hard work (Cheung, 1997). Additional recommendations within the Memorandum include conducting the interview as soon as possible after the event, in a relaxed and informal setting, and for interviews not to last more than one hour (Davies & Westcott, 1999).

However, researchers have argued that there are at least two limitations with the Memorandum. First, Lamb et al. (2009) argue that the Memorandum does not provide enough concrete and detailed guidance to interviewers. In addition, the Memorandum does not provide ample opportunity for children to practice responding to open-ended questions prior to the substantive phase of the interview. Furthermore, there is also a lack of research demonstrating the effectiveness of the Memorandum in the field.

### **Systematic Approach to Gathering Evidence**

The Systematic Approach to Gathering Evidence (SAGE) technique was designed for children who would not disclose abusive events and for children with learning disabilities (Roberts & Glasgow, 1993). This technique involves repeated interviews with the interviewer discussing significant persons and places to the child and their attitudes towards them. Through systematic comparison of the child's responses, Roberts and Glasgow hypothesized that trained interviewers are able to identify areas of concern to be discussed in more detail with the child. A search of the peer-reviewed literature shows an absence of studies examining the validity of the SAGE technique; the research by Roberts and Glasgow (1993) appears to be the only study examining this technique. While apparently not used widely, the inclusion of the SAGE technique in the current manuscript was done to ensure completeness in examining existing child interviewing

protocols. In addition to the lack of empirical validation, the inclusion of repeated interviews is in direct conflict with what best practices tell us about child interviewing. Specifically, repeated interviews risk the chance of suggestibility and memory contamination between interviews (e.g., from sources such as a parent discussing the incident) and also risk increasing the stress or anxiety experienced by the child (Quas & Schaaf, 2002).

### **Narrative Elaboration Technique**

The Narrative Elaboration Technique (NET) was developed by Saywitz and Snyder as a means to increase the amount of information provided by children, while reducing any chance of suggestibility (Saywitz & Snyder, 1993; 1996). The goal of the NET was to incorporate how children search their memories, and also to circumvent potential child development limitations. Specifically, researchers have hypothesized that children rely on external cues when searching their memory for relevant information (Fivush, 1993). The NET provides a guided framework for the child to provide autobiographical or event-related information. The NET uses visual cue cards to help the child organize information into five categories, namely people, locations, actions, conversation/affective states, and consequences (see Saywitz & Snyder, 1996 for a sample of the visual cue cards). Prior to the interview, children first take part in pre-interview training where they practice delivering a narrative. If the narrative is too short, interviewers are instructed to use the visual cue cards to remind the children of the type of information needed. The same process is followed during the child's account of the event. Analog studies examining the NET have found that children provided significantly more

details with this technique, compared to those in control groups (Camparo, Wagner, Saywitz, 2001; Saywitz, Snyder, & Lamphear, 1996).

There are three potential limitations of the NET. One limitation is that the child may have difficulty seeing the cards as representing something they are meant to extract from their memory (i.e., representational insight; DeLoache, 2000; DeLoache, 2005). This may lead children to make up stories about the cards or incorporate fantasy into their narrative. A second limitation is that the NET encourages repeated prompting, even if the child indicates that they do not recall a particular piece of information (Pipe et al., 2004). The use of repeated prompts may cause the child to provide false information. A third limitation of the NET is that it has not undergone testing in a forensic setting (Dion & Cyr, 2008). Recent research, however, has examined the NET in a more ecologically valid setting (i.e., under a stressful hospital situation) and found support for the NET (Peterson, Warren, & Hayes, 2013). However, more research using ecologically valid and forensic settings is needed before the NET can be deemed a reliable interviewing technique. It should be noted that simply asking the child to report specific types of information (e.g., people, settings, actions), without the use of visual cue cards, can provide just as much information (Bowen & Howie, 2002; Poole & Lindsay, 2002) without the risk of suggestibility.

### **Step-Wise Interview**

The Step-Wise Interview was developed by Yuille and his colleagues as a means to deal with increasing rates of sexual abuse, coupled with false allegations (Yuille et al., 1993). The Step-Wise Interview was also developed to rectify the issue of poor interview



training afforded to interviewers and builds on components of the CI. This particular interviewing protocol adopts a funnel approach to questioning and is divided into nine steps for the interviewer to progress through during the course of the interview. In this non-leading and non-suggestive method of interviewing, the first step is labeled the introduction. In this step, the interviewer addresses the interview formalities such as stating the date and time. In the next step, the interviewer builds rapport with the child. The interviewer builds rapport through discussing neutral topics with the child, such as hobbies. During this step, the interviewer is encouraged to assess the child's competencies (i.e., social, linguistic, cognitive, and behavioural). Also during this step, the interviewer assesses the level of information the child is able to provide. This is done through the interviewer asking the child to provide a narrative of two past memorable events (e.g., birthday, family vacation). Based on the practice interview, the interviewer is able to ascertain the amount and type of information the child is able to provide throughout the rest of the interview, continue to build rapport, and teach the child that he or she will be doing most of the speaking during the interview. The third step is optional and involves the interviewer discussing the interview rules (e.g., "If I misunderstand something you say, please tell me"). In the fourth step, the interviewer establishes that the child understands the differences between telling the truth and a lie, and also the consequences of lying. In the fifth step, the interview asks a general question to ensure that the child understands the reason for the interview. In the sixth step, the interviewer obtains a free narrative from the child regarding the event in question. The seventh step involves the interviewer using open questions to assist the child in recalling additional

details. In order to ensure that the information is reliable, it is important that questions are based solely on information provided by the child previously. In the eighth step, which is optional, the interviewer asks more specific questions to clarify and possibly extend previous answers. Also optional is for interviewers to use representational aids, such as dolls or drawings, to assist children with language and/or emotional difficulties in providing their account. Finally, the ninth step consists of the interviewer concluding the interview by asking any other people present (e.g., social worker) if he or she has any questions, if the child has any questions, thanking the child for their time and effort, and explaining to the child how the investigation will unfold (Yuille et al., 1993). In order to minimize distractions, it is recommended that the interview be conducted in a room free of toys, that parents and/or guardians not be present during the interview, and that the interviewer not interrupt the child while he or she is speaking.

The main limitation with the Step-Wise Interview is the potential use of representational aids during the interview. In addition, the Step-Wise Interview has not received systematic empirical study with either analog or field experiments.

### **CornerHouse RATAC Protocol**

The CornerHouse RATAC (Rapport, Anatomy Identification, Touch Inquiry, Abuse, and Closure) Protocol, also known as the Finding Words Approach, was developed by Walters and colleagues and is used often in the United States for child interviewing (Walters, Holmes, Bauer, & Vieth, 2003). However, as reported by Brown and Lamb (2009) it is unclear exactly what specific practices RATAC-trained interviewers actually use. Toth (2011) reported that in the rapport phase, children are

asked to draw “family circles” (used to identify who the child lives with and help structure their narrative). During the anatomy phase, children are asked to name body parts on anatomically correct drawings. Interviewers use these drawings to discuss types of touches with the child. When obtaining an account of the experienced event, RATAC interviewers are instructed to use fewer free recall questions and more direct questions. Toth also stated, however, that no research exists examining the question types used in RATAC-based interviews. As there are a number of problems with the RATAC protocol (e.g., no empirical studies examining the interviewing technique, a lack of knowledge about the specific practices of the technique in the field), it is inadvisable to use it for child interviews.

#### **National Institute of Child Health and Human Development (NICHD) Protocol.**

The National Institute of Child Health and Human Development (NICHD) protocol is a fully structured interview guideline (Lamb, Hershkowitz, Orbach, & Esplin, 2008; Orbach et al., 2000; Sternberg et al., 2001b). The NICHD protocol builds on components from the Memorandum, the Step-Wise Interview, and the CI, and is considered the gold standard of child interviewing protocols.

The NICHD protocol is divided into three phases. The first phase is the pre-substantive, or introductory, phase where the interviewer establishes ground rules for the interview. In this phase, the interviewer discusses the difference between telling the truth and lies, that it is acceptable for the child to say that he or she does not know or does not understand something, and that it is acceptable to correct the interviewer. The child is then asked to discuss two fairly recent memorable events (e.g., birthday, family vacation).

Children are prompted with open-ended questions during this phase. This pre-substantive phase allows the child to practice recalling and reporting events from memory via open-ended prompts, build rapport with the interviewer, and also teaches the child that he or she will be doing the majority of the talking during the interview (i.e., that it will not be a question and answer session). In the next phase, the substantive phase, the interviewer asks the child a series of open-ended questions to ensure that the child understands the reason(s) for the interview, to obtain disclosure, and to extract a large amount of detail from the child. The NICHD interview ends with the child and interviewer discussing neutral events.

One of the key features of the NICHD protocol is that interviewers are provided with structured guidelines. Specifically, a script is provided to interviewers which allows the interviewer to phrase their questions depending on the specific interview (e.g., if the child does not disclose). Furthermore, the NICHD ensures that the interviewer uses the child's responses to build on cued open-ended prompts for eliciting further information. The use of the NICHD protocol results in the interviewer being able to elicit more complete and detailed information compared to unstructured interviews, and also reduces any possible interviewer biases or chance of suggestibility (Herman, 2009; Hershkowitz, Fisher, Lamb, & Horowitz, 2007).

In addition to being based on sound developmental and psychological science, the NICHD protocol has also been validated by a number of empirical field studies (Cyr & Lamb, 2009; Dion & Cyr, 2008; Herman, 2009; Lamb et al., 2009; Orbach et al., 2000; Orbach & Lamb, 2001; Sternberg et al., 2001b). These field studies showed that

interviewers using the NICHD protocol, compared to unstructured interviews or even the Memorandum, asked more open-ended questions, less problematic questions (e.g., closed-ended), and obtained significantly more information. In addition, use of the NICHD protocol has resulted in interviewers obtaining more investigative, central, and verifiable leads (Darvish, Hershkowitz, Lamb, & Orbach, 2008), and fewer cases being dropped (Pipe, Orbach, Lamb, Abbott, & Stewart, 2013).

It should also be noted that Brown, Lamb, and colleagues are currently pursuing a program of research to examine the effectiveness of the NICHD with children who are mentally delayed. The preliminary results of their studies are promising, showing that children with mental retardation can perform well when being interviewed using NICHD protocol guidelines (Brown & Lamb, 2009).

### **Summary of Child Interviewing Practices**

As can be seen, there are a number of differences and commonalities between the seven interviewing protocols discussed above. For example, a number of the protocols incorporate good features such as conducting a practice interview about a neutral event (Cognitive Interview, the NET, Step-Wise, NICHD), obtaining free narrative (Cognitive Interview, Memorandum, Step-Wise, NICHD), and building rapport (Memorandum, Step-Wise, NICHD). In addition, a number of protocols encourage the use of a funnel-approach to questioning and the use of guidelines such as an instruction to tell the truth (Memorandum, Step-Wise, NICHD). A number of interview protocols advocate the use of inappropriate techniques including repeated interviews (SAGE), use of poor question types and representational aids (NET, CornerHouse RATAAC). However, the NICHD

protocol is the only interviewing technique to incorporate fully structured guidelines and the only one to be empirically validated by field studies.

### **The Current Study**

The goal of the current study is to provide an evaluation of the quality of child interviewing practices in one Canadian police organization. Such an evaluation is important because a picture of the current situation is required to determine how well the Canadian police organization has responded to the Lamer inquiry. In addition, before any organization is able to justify organizational changes and implement best practices, evidence needs to be provided to stakeholders that existing practices require reform, and ultimately, there needs to be political and financial will to make the reforms happen.

## Method

### Sample

A convenience sample ( $N = 45$ ) of police interviews with children, conducted between 2006 and 2012, was obtained from a Canadian police organization. After signing a confidentiality agreement, the author was provided with access to an office in a secure building along with the study material (e.g., interview transcripts, audio recordings). As the data are considered secondary data, it was not necessary to obtain permission from the Interdisciplinary Committee on Ethics in Human Research (ICEHR). All transcripts and audio records were direct copies of original documents (i.e., no information was redacted). The mean age of the children was 11.16 years ( $SD = 3.23$ , range: 3 – 16). Thirty-three (73.33%) of the children were alleged victims and the remaining children were witnesses. Twenty-four of the 33 alleged victims (72.73%) and eight of the 13 witnesses (61.54%) were girls. The types of crimes that the children were interviewed about included sexual assault (64.44%), assault (24.44%), exhibitionism (4.44%), internet luring (4.44%), and voyeurism (2.22%). Overall, the average length of an entire interview was 45.20 min ( $SD = 23.72$ , range: 5 – 102,  $n = 44$ ) and 35.68 min ( $SD = 20.82$ , range: 4 – 92) for the substantive phase. In 33 of victim interviews with an alleged child victim, a disclosure (i.e., the act of discussing being a victim of a crime) was made 93.94% of the time ( $n = 31$ ).

One interviewer was present in 40.00% of the interviews, and two in the remaining interviews. Fifteen different primary police officers (and 11 different social workers) comprised the sample of individuals conducting the interviews – with 26.67% of

the interviews being the most carried out by any one interviewer. Social workers always held the position of secondary interviewer and rarely contributed to the interview process. No demographic information on the social workers was available. Approximately 53% of the primary interviewers were men. All primary interviewers held the rank of constable. The mean age of the primary interviewers was 38.13 years ( $SD = 4.86$ , range: 27 – 47) and the average years of policing experience was 9.29 ( $SD = 6.55$ , range: 2 – 24). Approximately 62% of the primary interviewers had received a two-week course on the PEACE method of interviewing. The PEACE method of interviewing is an inquisitorial approach to interviewing adults that is based on empirical, scientific research. The PEACE interviewing course covers aspects of adult interviewing such as a lecture on memory (e.g., encoding, storing, and retrieval), question types, note-taking techniques, and communication fundamentals (e.g., rapport building, active listening). In addition, the lectures are followed by practice sessions, allowing the trainees to put theoretical knowledge into practice. Much like the NICHD protocol, the PEACE method of interviewing incorporates best practices such as rapport building and the use of open-ended questions (see Snook, Eastwood, Stinson, Tedeschi, & House, 2010 for a complete review of the PEACE method of interviewing adults).

## **Materials**

Thirty-five of the interviews were transcribed by clerical staff at the participating police organization and provided to the researcher on a compact disc, along with audio recordings of the interviews (audio was unavailable for one transcript). The remaining 10 interviews were transcribed from audio and/or video recordings by the primary researcher



and checked for accuracy and completeness. A coding guide and content dictionary were created based on a reading of the literature on the NICHD protocol for interviewing children (e.g., Lamb et al., 2008). To make the coding process manageable, the coding guide was divided into five sections (see Appendix A for operational definitions of the components contained in the sections below).

The first section contained eight behaviours that ought to occur at the beginning of a child interview (i.e., introductory behaviours). These behaviours pertain to whether or not the interviewer: explained the purpose of the interview, checked to see if the child knows the difference between telling the truth and a lie, explained that it is acceptable to say “I don’t know”, explained that it is acceptable to say “I don’t understand”, explained that it is acceptable to correct the interviewer, attempted to build rapport, conducted narrative training, and established that the child understands why he/she is being interviewed/reason for interview.

The second section consisted of five interview behaviours that ought to be avoided in child interviews (i.e., inappropriate behaviours). These behaviours pertained to whether or not the room was free from distractions, the interviewer engaged in positive reinforcement (and the number of times it was used), the interviewer engaged in negative reinforcement (and the number of times it was used), the interviewer used dolls/drawings/other representational aids, and the interviewer told the child to “imagine” or “pretend”.

The third section comprised eight question types that were used during the substantive phase of the interview (adapted from Lamb et al., 2008). The question types

were invitations, directives, closed yes/no questions, forced-choice, suggestions, clarifications, multiple questions, and summary statements.

The fourth section of the coding guide comprised the type of responses provided by the children, along with the space to record the number of unique central and peripheral details. Ten interviewee response types were adapted from Lamb et al., (2008) and include responsive utterances, unresponsive utterances, digressions, requests for clarification, unclear utterances, no answer provided, yes responses, no responses, don't know responses, and incomplete utterances. This section also contained the space to record whether or not the child selected a forced-choice option (along with the option chosen), and whether the interviewee agreed or disagreed with a suggestive utterance.

The fifth section contained the total number of words spoken by the interviewer(s) and child. This section also contained the space to record whether or not other individual(s) were present (e.g., parent) during the interview, the number of interruptions, the length of the entire interview (minutes), the length of the substantive phase (minutes), and whether or not the alleged victim provided a disclosure during the interview.

## **Procedure**

As the NICHD protocol is considered the gold standard of child interviewing protocols, it was used as the guiding protocol for the current study. Each interview was read once and coded for the introductory behaviours, inappropriate behaviours, and question and response types. The response lengths of the interviewer(s) and child were then calculated using the word count function of Microsoft Word 2010. The transcripts were read a second time to determine the number of central and peripheral details (see

Appendix A for the specific coding sub-categories of central and peripheral details). Each interview was then listened to in order to determine the number of interruptions and the lengths the entire interview and of the substantive phase.

### **Reliability Analysis**

Inter-rater reliability analysis was carried out by having an independent researcher code 10 (22.22%) of the sample, which were selected randomly. The independent coder was provided with a one-hour long training session that covered the practical aspects of coding the transcripts, the structure and content of the coding guide, and the content dictionary. The reliability of coding was measured using Cohen's Kappa (Cohen, 1960) and percentage agreement (in brackets). The mean agreement for all behaviours was  $\kappa = .85$  (92.67%). Agreement for the eight introductory behaviours was  $\kappa = .88$  (94.44%),  $\kappa = .80$  (83.33%) for the five inappropriate interview behaviours (see Table 1 for a breakdown of the individual components),  $\kappa = .71$  (77.99%) for question types,  $\kappa = .83$  (90.94%) for response type,  $\kappa = .95$  (96.99%) for type of detail, and  $\kappa = .67$  (84.83%) for whether the details were central or peripheral. These values suggest an excellent level of agreement between the coders (Landis & Koch, 1977).

## **Results**

### **Introductory behaviours**

How often each of eight introductory behaviours occurred, along with the relationship (in brackets) between these behaviours and the age of the child, is reported below. The interviewer explained the purpose of the interview to the child in 75.56% of

interviews ( $r = .22, p = .14$ )<sup>1</sup>, and checked to see if the child knew the difference between telling the truth and telling a lie in 17.78% of interviews ( $r = -.39, p = .009$ ). The interviewer explained that it is acceptable for the child to: say “I don’t know” in 28.89% of interviews ( $r = -.09, p = .55$ ), say “I don’t understand” in 17.78% of interviews ( $r = -.17, p = .27$ ), and correct the interviewer in 20.00% of interviews ( $r = -.29, p = .06$ ). The interviewer built rapport in 31.11% of the interviews ( $r = .68, p < .001$ ). Rapport building was accomplished by discussing: school related activities (15.56%), Christmas (8.89%), video games (6.67%), pets (4.44%), summer camp, summer plans, and most recent birthday (2.22% each). Rapport was also built by playing with blocks with the child (2.22%) and colouring with the child (2.22%). The interviewer(s) carried out narrative training in 11.11% of interviews ( $r = -.31, p = .04$ ). Lastly, the interviewer established that the child understood why he/she was being interviewed in 84.44% of the interviews ( $r = .29, p = .05$ ). Perhaps most importantly were the findings that, on average, few of the eight introductory behaviours were exhibited by the interviewers ( $M = 2.87, SD = 1.71$ ; or 35.88%), and the presence of introductory behaviours decreased as the child’s age increased,  $r = -.34, p = .022$ .

### **Inappropriate interview behaviours**

The interviewer engaged in positive reinforcement in 15.56% of the interviews. On average, positive reinforcement was observed 1.84 times ( $SD = 0.37$ , range: 1 - 5) within the seven interviews containing positive reinforcement. None of the interviewers

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<sup>1</sup> The degrees of freedom for all correlations was 43.

engaged in negative reinforcement. In one of the interviews, an interviewer used a teddy bear as a representational aid. In another interview, the child was told to “imagine” or “pretend” as an instruction when giving her statement. Of the nine interviews that were video recorded, four (44.44%) of them showed evidence of multiple forms of external distractions. The distractions included colouring books (75.00%), toys (50.00%), story-books (25.00%), and a child’s cell phone (25.00%). Taken together, these findings suggest that these inappropriate behaviours were exhibited infrequently.

On average, 53.85% ( $SD = 13.48$ ,  $CI = 49.91, 57.79$ )<sup>2</sup> of the words spoken in an interview was attributed to the child. The 80-20 talking rule (i.e., the child’s speaking time accounts for 80% of the interview and the interview speaking time is 20% of the interview) was violated in 100% of the interviews. Furthermore, a 70-30 rule was violated in 82.22% of the interviews and a 60-40 rule was violated in 66.6% of the interviews. In 19 (42.22%) of the interviews, the interviewer spoke more than the child. The correlation between the child’s age and the percentage of words spoken by both interviewers was  $r = -.33$ ,  $p = .029$ , meaning that the older the child, the fewer the number of words spoken by the interviewer. The average number of interruptions was 3.27 ( $SD = 2.83$ ,  $CI = 2.44, 4.10$ ). Overall, the findings suggest that the interviewers talked too much.

### Question types

The average number of questions per interview was 109.24 ( $SD = 53.05$ , 95%  $CI = 93.74, 124.74$ ). The mean percentage of each question type asked per interview, as a

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<sup>2</sup> All confidence intervals were at the 95% level.

function of age, is shown in Table 2. There was variation across all ages in terms of how often open-ended invitations (range: 0.37 - 25.36) and closed yes/no questions (range: 19.15 – 44.42) were asked on average. There was little variation in how often the remaining question types were asked. On average, 36.55% ( $SD = 10.82$ ,  $CI = 33.39$ , 39.71) of all questions asked were closed yes/no, 29.91% ( $SD = 8.05$ ,  $CI = 27.56$ , 32.26) were directive, 7.60% ( $SD = 6.40$ ,  $CI = 5.73$ , 9.47) were clarification, 7.93% ( $SD = 10.40$ ,  $CI = 4.89$ , 10.97) were invitations, 6.49% ( $SD = 6.62$ ,  $CI = 4.56$ , 8.42) were summary statements, 4.62% ( $SD = 3.94$ ,  $CI = 3.47$ , 5.77) were suggestive utterances, 4.07% ( $SD = 4.03$ ,  $CI = 2.89$ , 5.52) were multiple questions, and 2.83% ( $SD = 2.04$ ,  $CI = 2.23$ , 3.43) were forced-choice questions. None of the correlations between age and question type was significant when a Bonferroni correction for multiple correlations was made ( $\alpha < .001$ ). Across all ages, the recommended use of appropriate question types was not followed well.

### Response types

The mean response type given per interview, as a function of age, is shown in Table 3. Responsive utterances had the highest variation across age (range: 31.78 – 77.95), while the other response types varied relatively little. On average, 65.22% ( $SD = 11.72$ , 95%  $CI = 61.80$ , 68.64) of the responses were responsive utterances, 17.31% were “yes” responses ( $SD = 8.05$ ,  $CI = 14.96$ , 19.66), 8.52% ( $SD = 5.13$ ,  $CI = 7.02$ , 10.02) were “no” responses, 2.80% ( $SD = 3.23$ ,  $CI = 1.86$ , 3.74) were “don’t know” responses, 1.67% ( $SD = 1.64$ ,  $CI = 1.19$ , 2.15) were unresponsive utterances, 1.73% ( $SD = 4.89$ ,  $CI = 0.00$ , 2.72) were digressions, 1.08% ( $SD = 1.18$ ,  $CI = 0.74$ , 1.42) were requests for

clarification, 0.82% ( $SD = 1.42$ ,  $CI = 0.41$ , 1.23) were incomplete utterances, and 0.69% ( $SD = 1.81$ ,  $CI = 0.16$ , 1.22) were unclear utterances. On average, the interviewee did not provide an answer 0.17% ( $SD = 0.72$ ,  $CI = 0.00$ , 0.38) of the time when a question was asked. As can be seen, responsive utterances composed the majority of response types. None of the correlations between age and percentage of response types was significant when the corrected alpha level was used.

When a closed yes/no question was asked, children responded with a “yes” response 22.52% of the time, and a “no” response 20.84% of the time. When asked a forced choice question, children chose option number one 33.57% of the time, chose option number two 25.87% of the time, chose both options 3.50% of the time, and option three 0.70% of the time. Note that in three of the instances where the child selected an option, the interviewer provided three options for the child to select from; in the remaining instances, the interviewer provided only two options. On average, when asked a suggestive question children acquiesced 50.49% of the time. Specifically, acquiescence was 71.43% for three year olds, 33.33% for five year olds, 30.00% for seven year olds, 50.00% for eight and nine year olds, 45% for ten year olds, 45.45% for eleven year olds, 38.89% for twelve year olds, 58.89% for thirteen year olds, 50.00% for fourteen year olds, 52.17% for fifteen year olds, and 75.00% for sixteen year olds. The level of acquiescence was highly variable across all ages.

The average response length provided after each of the eight question types, as a function of age, is shown in Table 4. On average, invitations resulted in the longest responses with 74.61 words ( $SD = 142.58$ ,  $CI = 59.94$ , 89.28). Invitations also had the

largest variation (range: 14.82 – 257.68), with younger children generally providing less information. The average response length for spontaneous utterances (i.e., instances where the child provided details without a prompt) was 54.49 words ( $SD = 46.78$ ,  $CI = 44.17, 64.81$ ), 25.47 words ( $SD = 88.47$ ,  $CI = 21.07, 29.87$ ) for directive utterances, 20.58 words ( $SD = 30.75$ ,  $CI = 16.36, 24.80$ ) for multiple questions, 18.48 words ( $SD = 31.95$ ,  $CI = 14.90, 22.06$ ) for summary statements, 14.54 words ( $SD = 34.52$ ,  $CI = 12.94, 16.14$ ) for closed yes/no options, 13.79 words ( $SD = 28.15$ ,  $CI = 9.18, 18.40$ ) for forced-choice questions, 10.00 words ( $SD = 29.03$ ,  $CI = 6.04, 13.96$ ) for suggestive utterances, and 8.97 words ( $SD = 18.36$ ,  $CI = 7.06, 10.88$ ) for clarifying questions. While there were no general trends, there was variation across response lengths for spontaneous utterances (range: 0 – 61), responses to directive questions (range: 5.33 – 66.61), and responses to closed yes/no questions (range: 4.26 – 27.34). All other response categories showed relatively little variation. Despite the infrequent use of open-ended questions, the findings show that this question type tends to produce the largest quantity of information.

The average number of central and peripheral details elicited by each of the eight question types, as a function of age, is shown in Table 5. Across all 45 interviews, 5,785 (59.57%) of the details were classified peripheral in nature and 3,926 (40.43%) of the details were classified as central to the investigation. The percentage of peripheral and central details elicited by question type is shown in Figure 1 and Figure 2, respectively. Of the peripheral details provided by the child, 62.80% were related to actions, 13.21% were related to people, 12.38% were related to times, and 11.62% were related to locations. In regards to the central details provided by the child, 77.79% were related to



actions, 9.27% were related to people, 6.62% were related to locations, and 6.32% were related to times. These findings suggest that the majority of the interview is dedicated to asking children about information that is not central to the investigation.

The percentage of peripheral details elicited using directive utterances was 40.98% ( $CI = 39.72.51, 42.26$ ), 24.29% ( $CI = 23.20, 25.42$ ) for closed yes/no questions, 16.64% ( $CI = 15.70, 17.62$ ) for invitations, 4.49% ( $CI = 3.98, 5.06$ ) for multiple questions, 3.72% ( $CI = 3.98, 5.06$ ) for summary statements, 3.55% ( $CI = 3.10, 4.06$ ) for spontaneous utterances, 2.96% ( $CI = 2.55, 3.43$ ) for clarifying questions, 1.77% ( $CI = 1.46, 2.14$ ) for suggestive utterances, and 1.32% ( $CI = 1.32, 1.98$ ) for forced-choice questions. None of the correlations between age and percentage of peripheral details was significant when the corrected alpha level was used. The findings suggest that the interviewers are spending the majority of their time asking children directive questions in order to elicit peripheral details.

In terms of central details, invitations resulted in the interviewee providing 39.99% of the details ( $CI = 38.47, 41.53$ ). The average number of details elicited using directive utterances was 29.27 ( $CI = 27.87, 30.71$ ), 16.84 details ( $CI = 15.70, 18.04$ ) for closed yes/no questions, 4.43 ( $CI = 3.83, 5.12$ ) for multiple questions, 2.95 ( $CI = 2.46, 3.53$ ) for summary statements, 2.24 ( $CI = 1.82, 2.75$ ) for forced-choice questions, 1.68 ( $CI = 1.32, 2.13$ ) for spontaneous utterances, 1.66 ( $CI = 1.31, 2.11$ ) for clarifying questions, and 0.94 details ( $CI = 0.68, 1.29$ ) for suggestive utterances. Invitations results in the highest variation across all age groups (range: 0.67 – 14.00). None of the correlations between age and number of central details was significant when the corrected

alpha level was used. Interestingly, the majority of the important investigative information was obtained through the use of open-ended questions.

## **Discussion**

The goal the current study was to evaluate the child interviewing practices in one Canadian police organization. The results revealed that, in broad terms, interviewers are not using best practices. Overall, interviewers did not properly set up the guidelines of the interview (through introductory behaviours) and did not ask many open-ended questions. Instead, interviewers tended to ask short-answer questions that may ultimately limit the amount of information provided by the child. These results suggest that there is much room for improvement and the implementation of the NICHD interviewing protocol is imperative.

Only two of the introductory behaviours were exhibited by the majority of interviewers, namely explaining the purpose of the interview to the child and establishing that the child understands why he or she is being interviewed. There is no doubting that these practices are certainly important for setting the stage for a proper interview. For example, if the child is aware of the purpose of the interview, then he or she is more likely to stay on topic. However, interviewers rarely used the other highly recommended introductory behaviours (e.g., that it is acceptable to correct the interviewer, narrative training) that are essential for interview success. Furthermore, although the guidelines for introductory behaviours outlined in the NICHD protocol should be used for children of all ages, it was found that the interviewers exhibited fewer of these behaviours when interviewing older children. It is not entirely surprising that the eight introductory

behaviours were not observed frequently as the interviewers did not receive training on the NICHD protocol. While, the majority of interviewers did receive a two-week PEACE method of interviewing training course, it is important to note that this training encompasses solely adult interviewees, and there is no discussion on how to properly interview children. Therefore, there are two possible reasons why the interviewers did not build rapport at the beginning of the interview. First, it is possible that the interviewer built rapport with the child prior to beginning the recorded interview. Second, as their previous PEACE training did not include a component on child interviewing, the interviewer may not have known the importance of building rapport with children (e.g., reduce their stress, teach them to be informative).

Consistent with past research on child interviewing (Cederborg, Orbach, Sternberg, & Lamb, 2000; Cyr & Lamb, 2009; Orbach & Lamb, 2001), the results of the current study showed that untrained interviewers rarely asked open-ended invitations. This finding may be due to a number of factors. First, it may be the case that interviewers simply do not use open-ended questions (i.e., those that begin with “Tell”, “Explain”, or “Describe”) in their everyday lives and thus may be difficult to use during an interview. One disconcerting finding is that, in the majority of the interviews, interviewers received adult interview training which covered the importance and practicalities of asking open-ended questions. Perhaps the failure to ask open-ended questions in child interviewing is due to a self-fulfilling prophecy held by the interviewers. That is, it may be the case that interviewers believe that children are unable to be credible witnesses and provide a large amount of details, so they attempt to take more control of the interview. For example,

Melinder, Goodman, Eilersten, and Magnussen (2004) conducted a survey of 143 police officers regarding their views of child witnesses. In response to the question examining whether or not police officers believed that children are credible witnesses, the respondents reported only a moderate rating (i.e., 3.10 out of 5), suggesting that police officers may be skeptical of child witnesses. In addition, a survey of 104 police officers revealed that interviewers often find it difficult to interview children, due to aspects such as language-related difficulties (Aldridge, & Wood, 2000). However, regardless of the reason for asking few open-ended questions, this is a troubling finding; such questions made up only seven percent of all questions asked by interviewers but provided the largest amount of information, and moreover, the largest amount of central details. Studies examining those trained in the NICHD protocol revealed that interviewers should ask significantly more open-ended questions (i.e., above 30%; Lamb et al., 2009).

In regards to the other types of questions asked, the results showed that over half of them were either closed yes/no or directive. The use of directive questions is appropriate near the end of the interview, once the interviewer believes that all information obtained through open-ended invitations has been exhausted. However, overreliance on these two question types limits greatly the amount of information provided by the child. Specifically, open-ended invitations yielded three times more information than directive questions and almost four times more information than closed/yes no questions. By focusing on directive and closed yes/no questions, interviewers may ultimately narrow the scope of their investigation as they are limiting the information that the child can provide.

It is also important to note that investigators obtained more peripheral details compared to central details. As the central details are the crux of the investigation, interviewers should have spent more time obtaining these details. Furthermore, as discussed previously, children are more likely to remember central details more accurately than peripheral details, and central details are less susceptible to suggestion (Cassel & Bjorklund, 1995; Coxon & Valentine, 1997; Goodman & Reed, 1986; Poole & White, 1991).

A positive finding from the current study is that interviewers used suggestive utterances, multiple, and forced-choice questions relatively infrequently. However, it is important to note that such questions should never be used in an interview. The use of the aforementioned question types poses a number of problems. First, suggestive utterances bring into question the reliability of the child's response. The results of the current study showed that children acquiesced to suggestive questions 50% of the time. Thus, the use of such questions will have an adverse effect on the information obtained by the interviewer and also the progression of the investigation. Second, multiple questions make it difficult for the child to discern which question to answer. Therefore, interviewers may not receive an answer to all of the questions asked. Last, forced-choice questions often cause the child to provide a guess to an answer, whether or not it is correct. Ultimately, such questions can lead to memory contamination and thus false information being brought into the investigation.

The results also showed that while interviewers did not interrupt the children often, they talked too much during the interviews. Specifically, in over half of the

interviews, the interviewers spoke more than the child. This finding is in stark contrast with interviews conducted with adult witnesses. Specifically, Wright and Alison (2004) and Snook and Keating (2010) found that interviewers spoke, on average, a little over 30% of the time. The over-talking finding from the current study may again be related to the interviewer's self-fulfilling prophecy of children not being able to provide complete and necessary information. As mentioned previously, perhaps interviewers feel the need to control the interview in order to facilitate the child in providing additional information. Interestingly, the amount of words spoken by both interviewers was higher when the child was a younger age. Thus, it appears that interviewers may also believe that young children are not capable of providing information freely.

One potential limitation of the study is that the interview transcripts used were not selected randomly; instead, a convenience sample was used. While a random sample is always preferable, it is not always possible when conducting such exploratory field studies. Specifically, researchers using sensitive police data, such as child interview transcripts, must work within the constraints of the participating police organization. However, the results of the current study are similar to the findings by other researchers in the same area (e.g., Cederborg et al., 2000; Lamb et al., 1996; Orbach & Lamb, 2001), thus representing a convergence of evidence.

The results of the current study showed that best interviewing practices, at least for one Canadian police organization, for obtaining reliable and complete accounts from children are not being followed. Furthermore, it seems likely that the findings of the current study can be generalized to other police organizations in Canada and the US due

to the reported findings that interview training and feedback are extremely limited or non-existent (Herman, 2009; Snook, House, MacDonald, & Eastwood, 2012, Sternberg et al., 2001b). The findings of the current study have implications in an applied context. Specifically, the results showed clearly that nation-wide policy change and additional resources for investigators are necessary. There is no doubt that it is difficult to implement policy change. For example, social science research has often been ignored or rejected by policy makers. In addition, legal actors often misunderstand findings from social scientific research (Ceci & Bruck, 1993). However, as is clear from the findings of the current study, a strategic, comprehensive, and nationally agreed framework on child interviewing practices must be adopted in order to ensure high quality investigations. As in the UK, any revision of policy must be informed by empirical research (Davies & Westcott, 1999). A national policy will ensure that the court and investigators are able to recognize children's strengths (e.g., that they are able to provide great amount of detail) and limitations (e.g., that their temporal organization is weaker at younger ages; Orbach & Lamb, 2007) and treat them as competent eyewitnesses.

In terms of additional resources, interviewers must be afforded child interview training and feedback. Such training needs to be practical, structured, and accompanied by theories of child development. As can be seen from the results of studies examining the NICHD protocol discussed in the introduction, training does work. Specifically, trained interviewers ask more open-ended questions which activate recall memory, and thus they obtain more complete and reliable information. Training also increases interviewer knowledge about child development and best interviewing practices. It is

important that interviewers of children receive empirically validated training, training which incorporates multiple practice sessions to ensure that interviewers are able to translate theoretical knowledge into tangible skills (Warren et al., 1999).

One caveat to training is that there is a need for feedback systems. For example, trained interviewers do not always follow the lessons from interview training (Brown & Lamb, 2009; Sternberg et al., 2001b). Furthermore, the findings of the current study revealed the skills that interviewers obtained from PEACE training, regarding questions types and rapport building, were no longer being followed (although, this may be due to the fact that the interviewers believed that such practices would not work with children). As feedback systems are of critical importance in ensuring that interviewer skills do not deteriorate, the NICHD protocol has built in a feedback mechanism. This feedback mechanism ensures that interviewers receive feedback regularly and quality control is carried out on their interviews. The value of feedback systems, and also the negative consequences of terminating feedback systems, have been demonstrated in a number of studies (e.g., Adams, Fields, & Verhave, 1999; Clark, 1971; Lamb, Sternberg, Orbach, Esplin, & Mitchell, 2002; Lamb et al., 2002b). That being said, more effort and resources need to be afforded to ensure the highest quality of child interviews, and thus high quality investigations.

Overall, the current study revealed that many of the suggested best practices for child interviewing are not being implemented. For instance, the interviewers did not use many introductory behaviours, used inappropriate question types, and talked too much. However, as is evident from the results of the current study, and the literature reviewed in



the introduction, children are in fact able to provide important details to police interviewers. Effective child interviewing practices help ensure that interviewers are able to maximize the amount of information obtained while minimizing suggestibility and thin accounts. In order to ensure that investigators obtain information necessary to conduct a thorough and efficient investigation, they must be afforded proper child interview training, namely the NICHD protocol. The NICHD protocol ensures that interviewers have background information regarding child development and also provides them with a structured approach for maximizing information extracted from the child. There is no doubt that child interviewing practices in Canada are in much need of reform. The onus is now on policy makers to take action and reform child interviewing practices.

**Table 1. The Kappa (and Percentage Agreement) Values for Introductory Behaviours and Inappropriate Interview Behaviours**

Variable	Kappa (Percentage Agreement)
Interviewer explained the purpose of the interview	.44 (70.00%)
Interviewer discussed knowledge of differences between truth and lies	1.00 (100%)
Interviewer explained that it is acceptable to say "I don't know"	1.00 (100%)
Interviewer explained that it is acceptable to say "I don't understand"	1.00 (100%)
Interviewer explained that it is acceptable to correct the interviewer*	-- (90.00%)
Interviewer attempted to build rapport	1.00 (100%)
How did the interview build rapport?	1.00 (100%)
Interviewer conducted narrative training*	-- (90.00%)
Interviewer established that the child understands reason for interview	1.00 (100%)
Room free of distractions	1.00 (100%)
Interviewer engaged in positive reinforcement	-.15 (40.00%)
Number of times interviewer engaged in positive reinforcement*	-- (70.00%)
Interviewer engaged in negative reinforcement	1.00 (100%)
Interviewer used dolls/drawings/other representational aids	1.00 (100%)
Interviewer told the child to "imagine" or "pretend"	1.00 (100%)

*Note.* Kappa value was unable to be calculated because there was no variation in one of the two columns by the two coders.

**Table 2. The Mean Percentage of Question Types Used as a Function of Age**

Age (years)	Question Type							
	Invitation	Directive	Closed Yes/No	Forced-Choice	Suggestive	Clarification	Multiple	Summary
3 ( <i>n</i> = 1)	3.23%	26.88%	40.86%	1.08%	7.53%	5.38%	15.05%	0.00%
5 ( <i>n</i> = 1)	23.40%	25.53%	19.15%	4.26%	6.38%	8.51%	6.38%	6.38%
6 ( <i>n</i> = 2)	25.36%	31.55%	24.80%	3.00%	0.00%	7.43%	4.67%	3.20%
7 ( <i>n</i> = 5)	16.41%	30.30%	28.03%	2.56%	3.49%	10.08%	6.61%	2.52%
8 ( <i>n</i> = 2)	5.00%	23.26%	39.17%	0.83%	13.86%	7.88%	2.50%	7.50%
9 ( <i>n</i> = 2)	0.37%	25.72%	44.42%	1.87%	4.24%	12.73%	2.61%	8.04%
10 ( <i>n</i> = 3)	19.14%	27.95%	32.44%	3.84%	5.62%	3.81%	3.49%	3.71%
11 ( <i>n</i> = 5)	4.15%	33.15%	40.43%	2.73%	4.79%	2.93%	5.83%	6.01%
12 ( <i>n</i> = 3)	4.18%	28.64%	41.13%	4.86%	5.04%	3.12%	4.79%	8.24%
13 ( <i>n</i> = 10)	4.67%	32.15%	40.37%	3.16%	3.70%	7.74%	3.45%	4.77%
14 ( <i>n</i> = 4)	3.78%	33.62%	34.28%	3.06%	3.69%	11.46%	2.77%	7.33%
15 ( <i>n</i> = 6)	4.44%	25.94%	37.74%	2.03%	4.16%	8.91%	1.63%	15.15%
16 ( <i>n</i> = 1)	7.55%	33.96%	37.74%	1.89%	7.55%	9.43%	0.00%	1.89%

**Table 3. The Mean Occurrence of Response Types as a Function of Age**

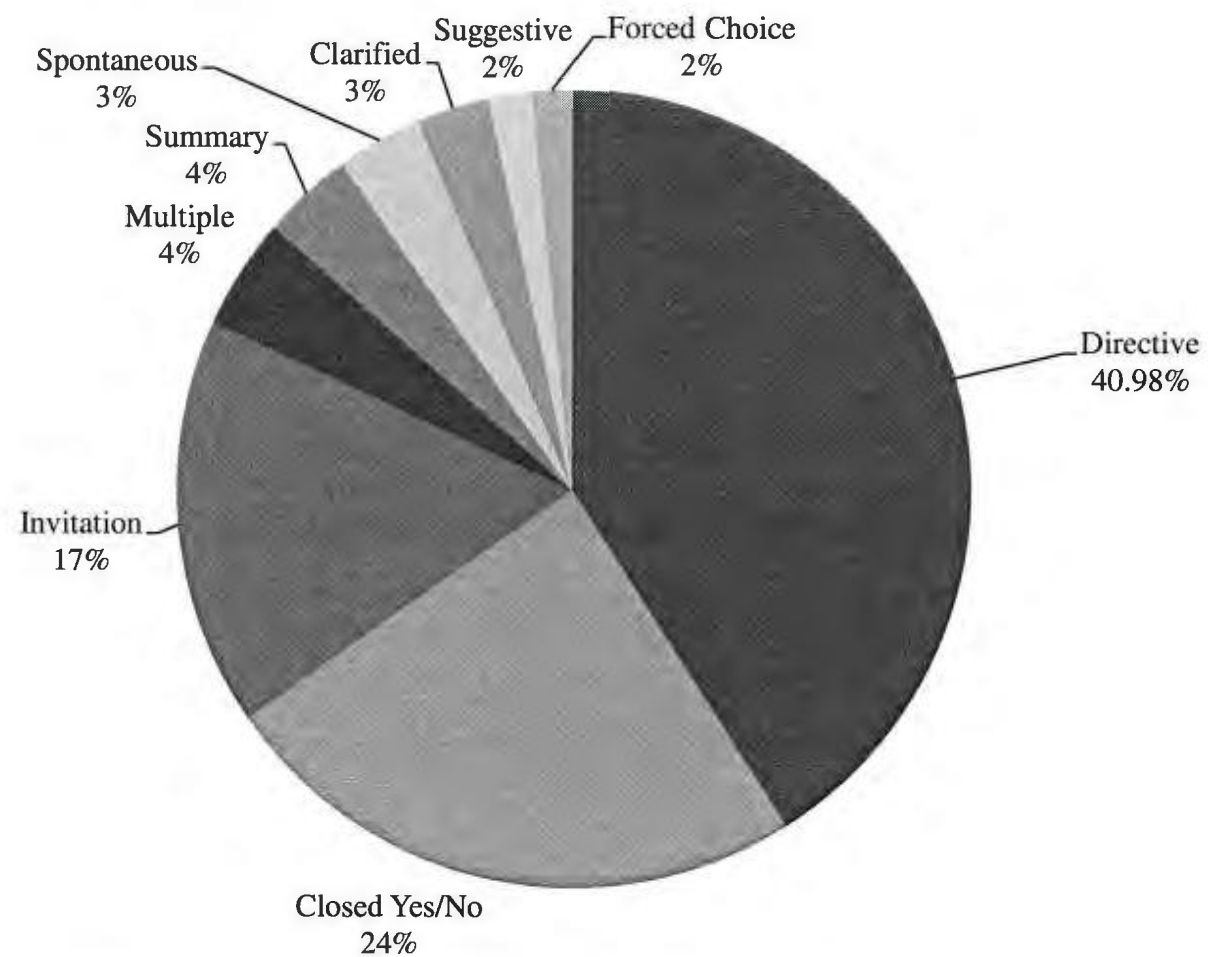
Age (years)	Response Type									
	Responsive Utterance	Yes Response	No Response	“Don’t Know”	Unresponsive Utterance	Non-Substantive Digression	Request for Clarification	Unclear Utterance	Incomplete Response	No Answer
3 ( <i>n</i> = 1)	31.78%	28.97%	13.08%	1.87%	0.93%	11.21%	0.00%	5.61%	1.87%	4.67%
5 ( <i>n</i> = 1)	58.33%	10.42%	8.33%	12.50%	4.17%	0.00%	0.00%	0.00%	6.25%	0.00%
6 ( <i>n</i> = 2)	70.46%	7.25%	6.97%	10.61%	0.70%	1.36%	2.30%	0.00%	0.35%	0.00%
7 ( <i>n</i> = 5)	71.11%	10.42%	4.77%	2.52%	2.04%	6.56%	1.33%	0.71%	0.54%	0.00%
8 ( <i>n</i> = 2)	46.00%	23.88%	13.61%	0.00%	0.70%	8.15%	3.73%	1.61%	2.32%	0.00%
9 ( <i>n</i> = 2)	63.81%	14.34%	8.55%	1.37%	5.46%	0.68%	0.00%	5.10%	0.34%	0.34%
10 ( <i>n</i> = 3)	77.95%	12.93%	5.35%	0.66%	1.11%	0.67%	0.56%	0.56%	0.00%	0.22%
11 ( <i>n</i> = 5)	65.17%	17.08%	9.25%	4.32%	1.72%	0.54%	0.90%	0.00%	1.03%	0.00%
12 ( <i>n</i> = 3)	71.13%	16.08%	9.76%	1.10%	0.00%	0.00%	0.84%	0.00%	0.82%	0.27%
13 ( <i>n</i> = 10)	66.42%	16.69%	10.81%	3.00%	1.35%	0.50%	0.87%	0.15%	0.21%	0.00%
14 ( <i>n</i> = 4)	62.85%	20.94%	7.32%	1.97%	1.68%	0.59%	2.23%	0.41%	1.78%	0.23%
15 ( <i>n</i> = 6)	64.07%	24.44%	6.14%	1.43%	1.98%	0.24%	0.60%	0.59%	0.51%	0.00%
16 ( <i>n</i> = 1)	55.36%	26.79%	14.29%	1.79%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%

**Table 4. The Average Response Length for Each of the Eight Question Types as a Function of Age**

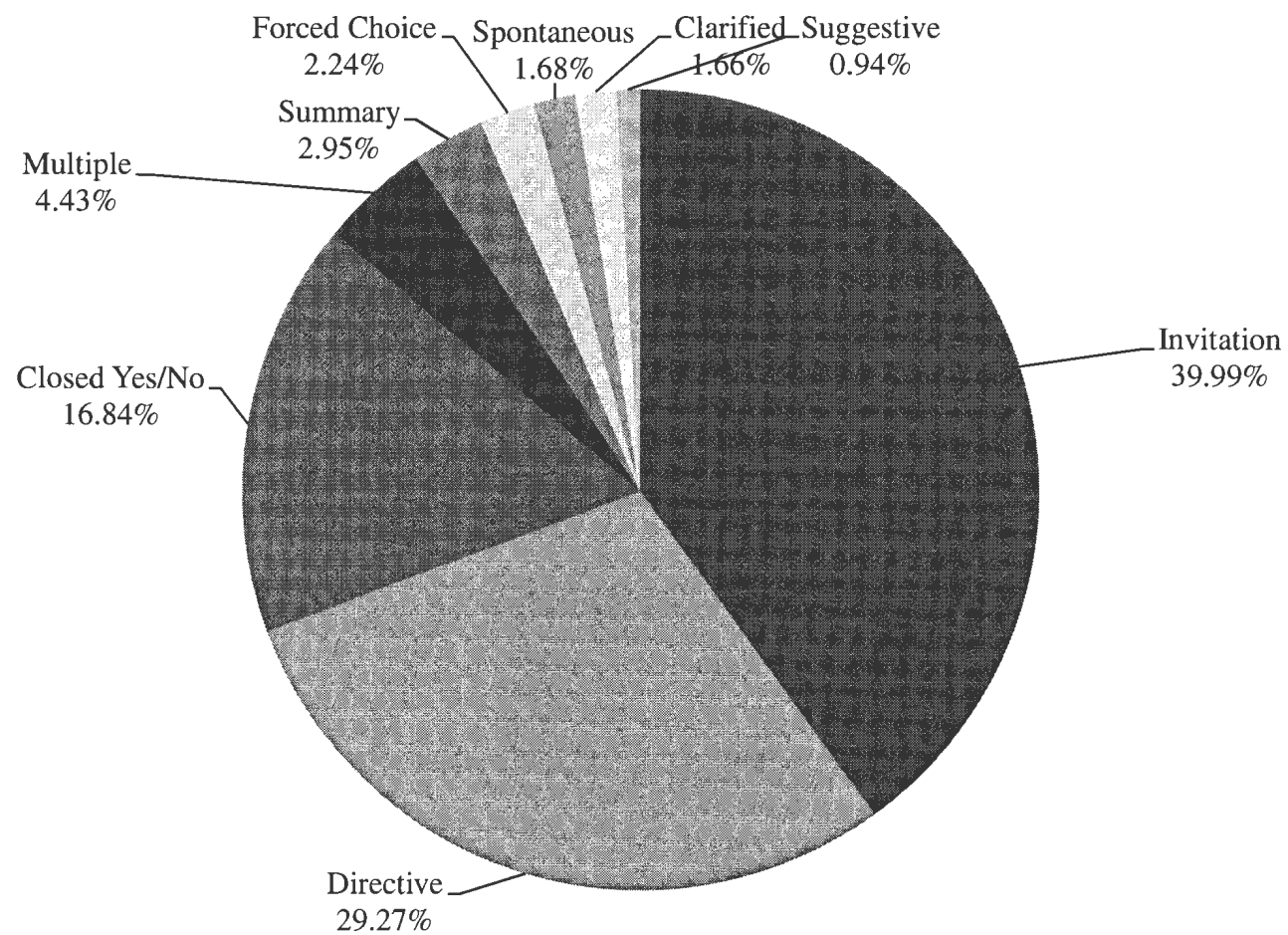
Age (years)	Question Type								
	Invitation	Spontaneous	Directive	Closed Yes/No	Forced-Choice	Suggestive	Clarification	Multiple	Summary
3 ( <i>n</i> = 1)	29.33	0.00	10.28	4.26	3.00	1.43	12.40	6.07	0.00
5 ( <i>n</i> = 1)	14.82	0.00	5.33	7.33	7.00	10.33	6.00	3.33	1.00
6 ( <i>n</i> = 2)	17.53	13.00	7.93	7.13	14.33	0.00	10.46	10.60	14.60
7 ( <i>n</i> = 5)	62.11	48.17	26.31	12.74	5.11	11.70	10.18	22.40	12.50
8 ( <i>n</i> = 2)	79.00	31.50	20.10	15.46	69.00	2.63	9.67	8.67	11.89
9 ( <i>n</i> = 2)	109.00	23.57	12.43	8.08	2.80	4.83	8.44	14.86	19.78
10 ( <i>n</i> = 3)	56.51	19.80	19.30	9.38	12.67	13.15	9.91	11.00	15.69
11 ( <i>n</i> = 5)	103.42	27.73	18.17	10.89	7.38	7.52	4.63	14.22	12.94
12 ( <i>n</i> = 3)	117.53	4.00	19.12	20.53	12.41	6.39	6.73	25.06	21.76
13 ( <i>n</i> = 10)	72.55	47.79	22.54	13.20	9.41	8.02	4.72	28.94	10.98
14 ( <i>n</i> = 4)	110.72	61.00	19.32	10.81	13.08	6.50	10.02	15.92	20.81
15 ( <i>n</i> = 6)	257.68	59.50	66.61	27.34	39.75	28.04	17.21	52.18	27.24
16 ( <i>n</i> = 1)	55.50	0.00	30.28	13.85	34.00	3.50	2.60	0.00	1.00

**Table 5. The Average Number of Central and Peripheral Details Elicited by Each Question Types, and Spontaneous Utterances**

Age (years)	Question Type								
	Invitation	Spontaneous	Directive	Closed Yes/No	Forced-Choice	Suggestive	Clarification	Multiple	Summary
3 ( <i>n</i> = 1)	0.67 (0.33)	0.00 (0.00)	0.92 (0.28)	0.03 (0.21)	3.00 (2.00)	1.43 (0.00)	0.60 (0.00)	0.14 (0.71)	0.00 (0.00)
5 ( <i>n</i> = 1)	1.00 (1.18)	0.00 (0.00)	0.42 (0.83)	0.00 (1.00)	0.50 (0.00)	0.00 (1.00)	0.00 (0.50)	0.00 (0.33)	0.00 (0.00)
6 ( <i>n</i> = 2)	1.12 (0.47)	0.00 (1.00)	0.42 (0.42)	0.29 (0.42)	1.22 (1.11)	0.00 (0.00)	0.38 (0.71)	0.60 (0.27)	0.10 (1.00)
7 ( <i>n</i> = 5)	3.31 (2.23)	0.33 (3.25)	1.04 (1.26)	0.44 (0.73)	0.33 (0.44)	0.40 (0.80)	0.27 (0.60)	2.20 (1.10)	0.44 (0.06)
8 ( <i>n</i> = 2)	2.67 (5.50)	0.50 (0.00)	0.90 (0.67)	1.04 (1.04)	2.00 (0.00)	0.13 (0.00)	0.33 (0.00)	1.00 (0.00)	0.56 (0.22)
9 ( <i>n</i> = 2)	14.00 (4.00)	1.86 (1.43)	0.35 (0.90)	0.35 (0.39)	0.60 (0.00)	0.00 (0.17)	0.28 (0.72)	1.29 (1.57)	0.89 (0.22)
10 ( <i>n</i> = 3)	4.32 (2.22)	0.20 (0.80)	0.73 (1.44)	0.31 (0.54)	12.67 (0.56)	0.50 (0.70)	0.00 (1.18)	1.00 (1.08)	0.56 (0.69)
11 ( <i>n</i> = 5)	6.46 (3.04)	0.09 (2.64)	0.45 (1.49)	0.38 (0.56)	0.75 (0.56)	0.03 (0.64)	0.16 (0.16)	0.33 (1.17)	0.38 (0.81)
12 ( <i>n</i> = 3)	9.33 (4.53)	0.00 (1.00)	0.67 (1.32)	0.44 (1.25)	0.18 (0.65)	0.17 (0.17)	0.45 (0.18)	1.00 (1.29)	0.76 (0.55)
13 ( <i>n</i> = 10)	4.87 (1.85)	2.21 (2.21)	0.85 (1.25)	0.44 (0.67)	0.61 (0.41)	0.21 (0.41)	0.12 (0.22)	1.00 (1.77)	0.52 (0.18)
14 ( <i>n</i> = 4)	8.00 (5.50)	0.00 (4.00)	0.47 (1.43)	0.14 (0.94)	0.31 (0.85)	0.28 (0.44)	0.20 (0.50)	0.08 (1.08)	0.14 (1.17)
15 ( <i>n</i> = 6)	9.29 (9.29)	0.21 (4.36)	0.96 (3.67)	0.38 (1.16)	1.00 (1.44)	0.00 (0.91)	0.02 (0.83)	1.09 (2.36)	0.19 (1.09)
16 ( <i>n</i> = 1)	5.50 (2.50)	0.00 (0.00)	1.56 (1.61)	0.05 (1.50)	2.00 (0.00)	0.25 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)



**Figure 1.** The percentage of peripheral details elicited as a function of question type



**Figure 2.** The percentage of central details elicited as a function of question type



## **Appendix A**

### **Introductory Behaviours**

Explained Purpose of Interview: The interviewer told the child what they will be doing during the interview (e.g., asking questions about the alleged incident).

Difference Between Truth and Lies: The interviewer asked the child for an example of something that was true and something that was not true.

Don't Know Instruction: The interviewer told the child that it is acceptable to say that they don't know something.

Don't Understand Instruction: The interviewer told the child that it is acceptable to say that they don't understand something.

Correct the Interviewer Instruction: The interviewer told the child that it is acceptable to correct the interviewer if he/she makes a mistake.

Build Rapport: The interviewer attempted to build rapport by discussing a neutral topic with the child.

Narrative Training: The interviewer asked an open-ended invitation to the child about a recent event (e.g., birthday).

Reason for Interview: The interviewer established that the child understands why he/she is being interviewed.

### **Inappropriate Interview Behaviours**

**Room Contains Distractions:** This variable was scored if the interview room contained distractions that diverted the interviewee's attention (e.g., colouring book, toys).

**Positive Reinforcement:** This variable was scored if the interviewer included positive reinforcement to the child's response (e.g., You are doing very well).

**Negative Reinforcement:** This variable was scored if the interviewer included negative reinforcement to the child's response (e.g., You're not doing very well).

**Representational Aids:** This variable was scored if the interviewer used representational aids (e.g., dolls, drawings).

**Imagine/Pretend Instruction:** This variable was scored if the interviewer told the child to "imagine" or "pretend" at any point throughout the interview.

### **Question Types**

**Open-ended Invitation:** Use questions, statements, or imperatives to elicit open-ended free-recall responses from the child. Such utterances do not delimit the child's focus except in a general way (e.g., "Tell me what happened?").

**Directive Utterance:** Refocus the child's attention on details or aspects of the alleged incident that the child has already mentioned, often using 'WH' questions which request additional information about some aspect of the event concerned (e.g., "What colour was the shirt?", when a shirt was mentioned previously).

**Closed Yes/No:** Questions that tap into cued recall as well, but are typically answered with a "Yes" or "No" response (e.g., "Did he have his face covered?")

**Forced-Choice:** This type of question only offers the child a limited number of possible responses (e.g., “Were your pants on or off?”).

**Suggestive Utterance:** Utterances stated in such a way that the interviewer strongly communicates what response is expected (e.g., “He forced you to do that, didn’t he?”) or assumes/reveals details that have not been revealed by the child (e.g., Child: “We laid on the sofa.” Interviewer: “He laid on you?”).

**Clarification:** Questions that repeats what the child has said, but puts it in the form of a question. These can usually be answered with a “yes” or a “no” (e.g. Witness: John said he went to a movie. Interviewer: Okay, so John told you that he went to a movie? Witness: Yes).

**Multiple Questions:** This question type involves the interviewing asking multiple questions without pausing and/or giving the interviewee a chance to respond (e.g., “Where were you? When did it happen? How did it happen?”).

**Summary:** The interviewer restates accurately what the child has just said in the form of a statement, without any explicit request for information or response.

## **Response Types**

**Central Details:** Any unique information provided by the child that was integral and crucial to understand the alleged criminal activity (Orbach, Hershkowitz, Lamb, Sternberg, Esplin, & Horowitz, 2000). Each unique central detail was also coded as a person, location, action, or time.

Peripheral Details: Any unique information provided by the child that was not integral or crucial to understanding the criminal event (Orbach et al., 2000). Each unique peripheral detail was also coded as a person, location, action, or time.

Responsive Utterance: This variable was scored if the child's utterance related to specific topics (aspects or details of the allegation) suggested by the interviewer in the preceding utterance.

Unresponsive Utterance: This variable was scored if the child's utterance was not related to the interviewer's previous utterance, but was related to the general topic of the investigation.

Non-substantive Digression: This variable was scored if the child's utterance was not related to the general topic of the investigation.

Request for Clarification or Restatement: This variable was scored if the child did not understand the questions and asks the interview to rephrase the question.

Unclear Utterance: This variable was scored if the child's utterance was incomprehensible (e.g., the child mumbled).

No answer provided: This variable was scored if the interviewee did not provide an answer.

Yes (or Nodding): This variable was scored if the interviewee said "yes" (or some variation: e.g., "yup", "uh-huh") or nodded their head in agreement.

No (or Shaking Head): This variable was scored if the interviewee said "no" (or some variation: e.g., "nope") or shook their head in disagreement.

Don't know: This variable was scored if the interviewee said "I don't know".

**Incomplete Utterance:** This variable was scored if the child did not answer full a question (e.g., Child: “umm”).

**No Answer Provided:** This variable was scored if the child did not provide an answer to the interviewer’s question.

**Forced-Choice Option 1/2/... Selected:** This variable was scored if the interviewee selected one of the forced-choice options posed by the interviewer.

**Suggestive:** This variable was scored if the interviewee either accepts answer given by a suggestive utterance or rejects the answer given by a suggestive utterance.

#### **Additional Interview Characteristics**

**Word Count:** To determine the word count of the interviewer(s), interviewee, and any other individual(s) present (e.g., parent), the word count feature of Microsoft Word 2010 was used.

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